

The diagram illustrates a network architecture with three main hosts connected via dashed lines representing network boundaries:

- SECURE HOST 1G** (top):
 - Contains **SECURITY PROXY 3A** and **METERING SERVER 3C** in the top row.
 - Contains **WEB SERVER 3B** and **CONTROL SERVER 3D** in the bottom row.
 - Internal connections: Bidirectional arrows between 3A and 3C, and between 3B and 3D.
- PUBLIC HOST 1F** (bottom):
 - Contains **REPORTING APPLICATION 3E**.
 - Connection: Bidirectional arrow between 3E and 3D.
- DATABASE HOST 1H** (right):
 - Contains **DATA 3G** (cylinder) and **DATABASE SERVER 3F** (rectangle).
 - Internal connection: Bidirectional arrow between 3G and 3F.
 - Connections: Unidirectional arrows from 3C and 3D to 3F.

External Connections:

- COMMUNICATION TO CLIENT 1A** (lightning bolt) points to the left boundary of PUBLIC HOST 1F.
- Two black circles at the top represent external network connections to SECURE HOST 1G.

The diagram illustrates the internal components of Client Computer 1A, which is enclosed in a dashed rectangular boundary. The components are:

- METERING MONITOR 4A**: A rectangular block at the top left.
- CLIENT APPLICATION 4C**: A stack of three rectangular blocks at the top right.
- LOGIN TOOL 4B**: A rectangular block at the bottom left.
- CONFIG FILE 4D**: A cylinder-shaped block at the bottom right.

Inter-component connections are shown with double-headed arrows:

- METERING MONITOR 4A and CLIENT APPLICATION 4C are connected.
- METERING MONITOR 4A and LOGIN TOOL 4B are connected.
- LOGIN TOOL 4B and CONFIG FILE 4D are connected.
- CLIENT APPLICATION 4C and CONFIG FILE 4D are connected.

External communication is indicated by a lightning bolt symbol and the text "COMMUNICATION TO BILLING SITE 1J" pointing to the METERING MONITOR 4A.

CLIENT COMPUTER 1A

Fig. 4

109260-2253660

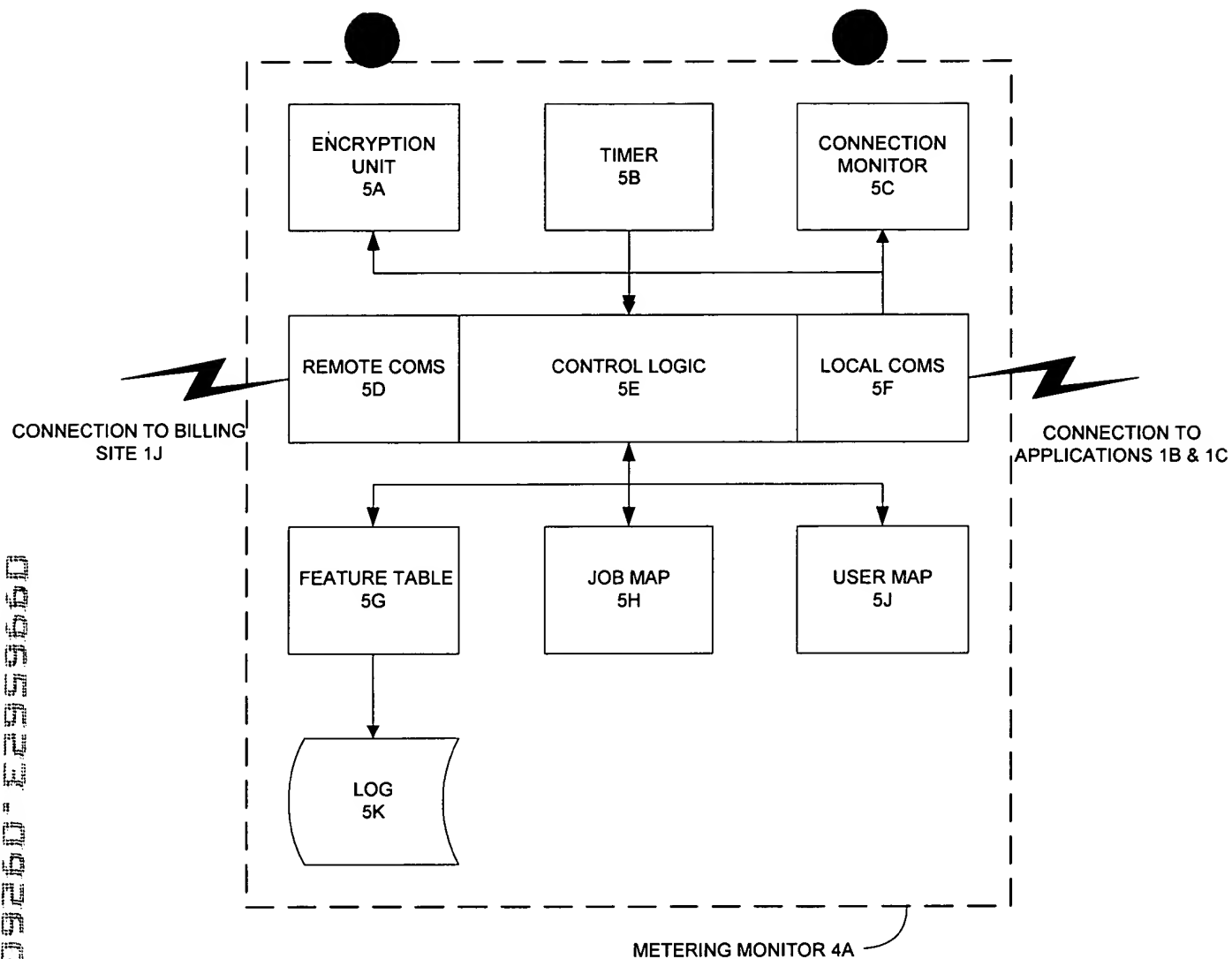


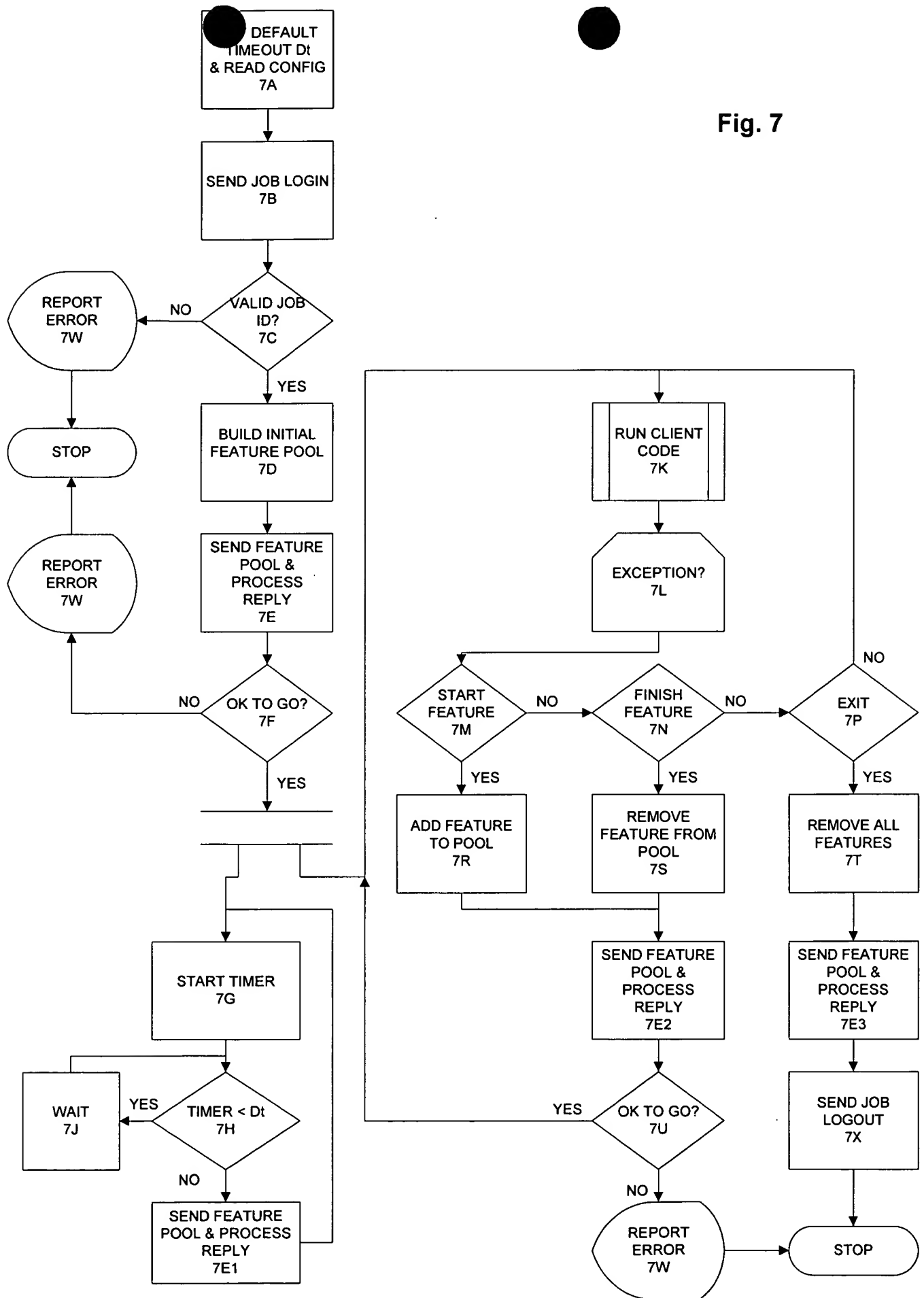
Fig. 5.

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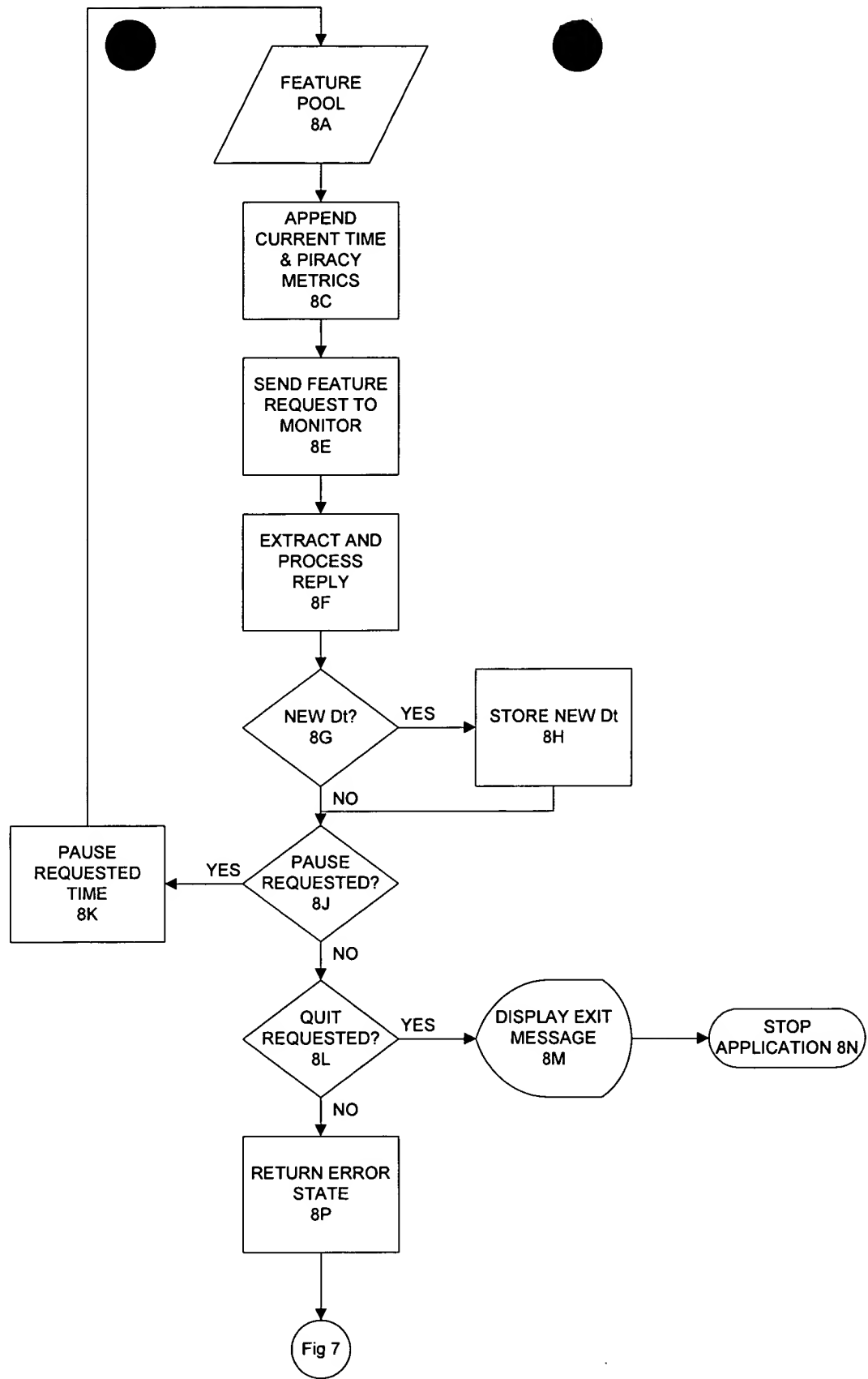
graph TD
    6A[INITIALIZE LOGIN TOOL 6A] --> 6B{CONFIG FILE? 6B}
    6B -- YES --> 6C[/READ CONFIG FILE 6C/]
    6B -- NO --> 6D[/INITIALIZE WITH DEFAULTS 6D/]
    6C --> 6E{MONITOR? 6E}
    6D --> 6E
    6E -- NO --> 6F[START MONITOR 6F]
    6F --> 6G[/USER INPUT 6G/]
    6E -- YES --> 6G
    6G --> 6H{CONFIG CHANGE? 6H}
    6H -- YES --> 6T[/INPUT CONFIG 6T/]
    6T --> 6U[/WRITE CONFIG 6U/]
    6U --> 6V[KILL MONITOR 6V]
    6V --> 6A
    6H -- NO --> 6K{LOGIN? 6K}
    6K -- YES --> 6L[SEND LOGIN TO MONITOR 6L]
    6K -- NO --> 6M{LOGOUT? 6M}
    6M -- YES --> 6N[SEND LOGOUT TO MONITOR 6N]
    6M -- NO --> 6P{EXIT? 6P}
    6L --> 6R{OK? 6R}
    6N --> 6R
    6P -- YES --> 6Q([STOP 6Q])
    6R -- YES --> 6Q
    6R -- NO --> 6S([DISPLAY ERROR 6S])
    6S --> 6G
  
```

Fig. 6

109260-22959550



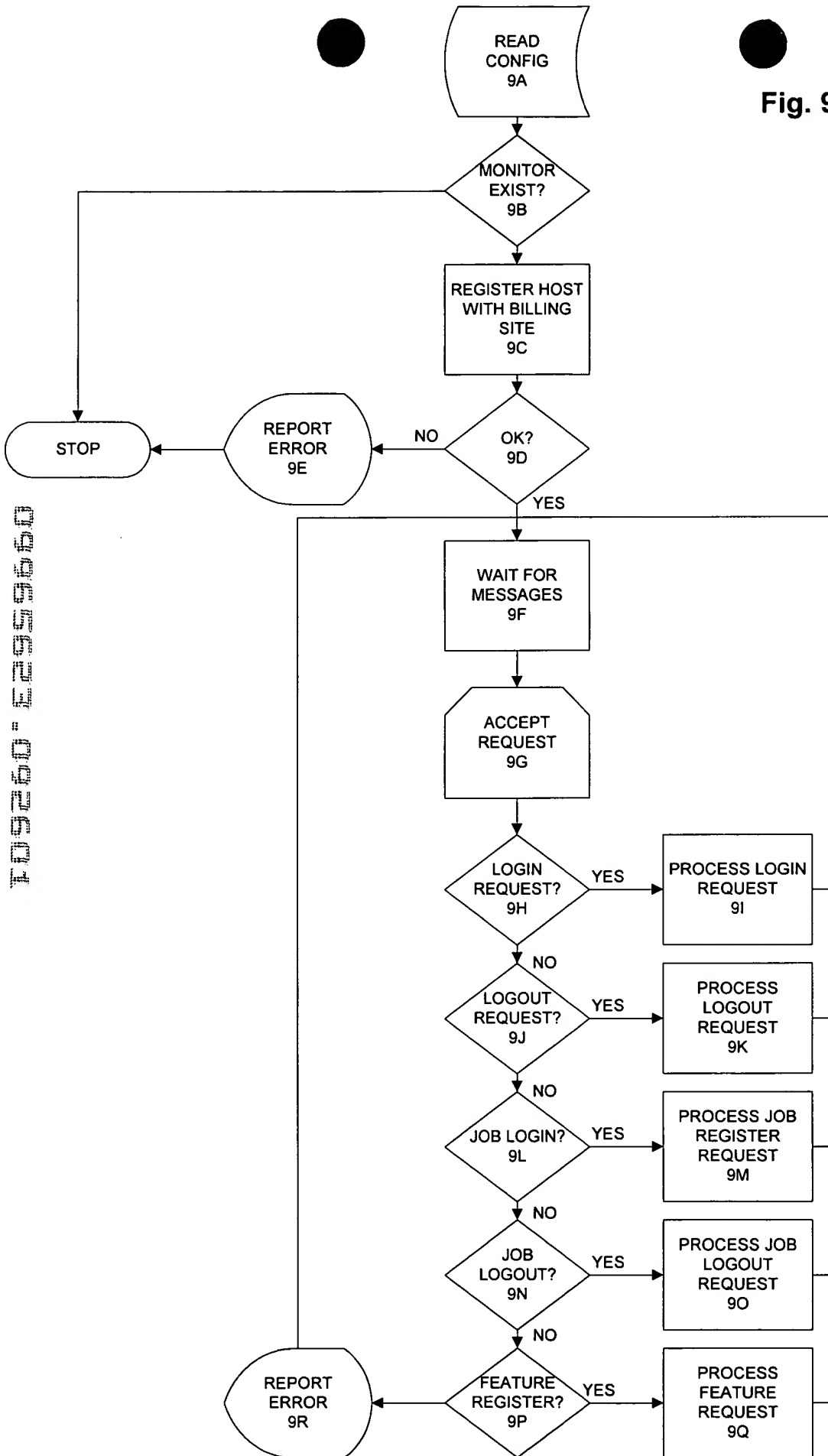
109260-02955660



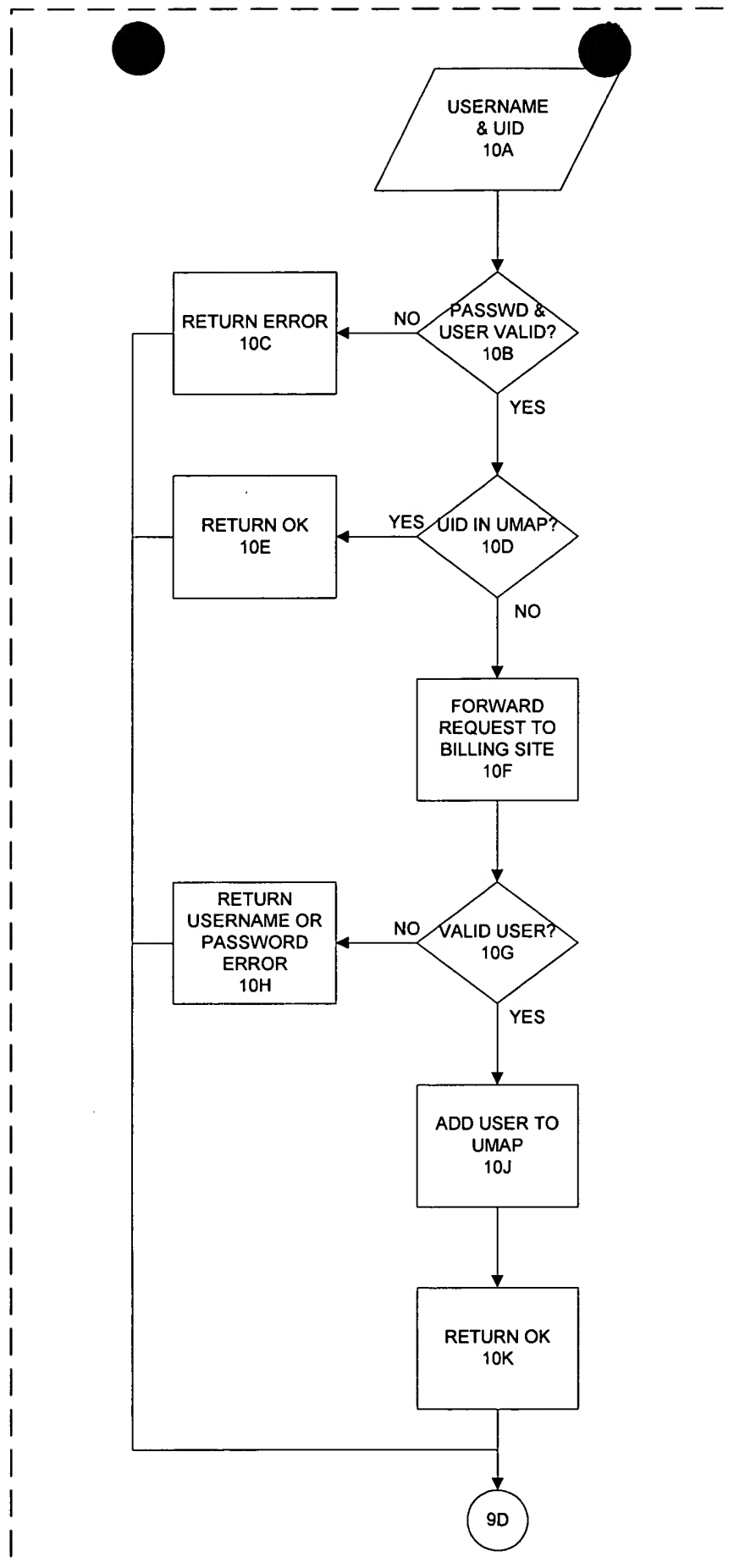
SEND FEATURE POOL
AND PROCESS REPLY
7E

Fig. 8

Fig. 9



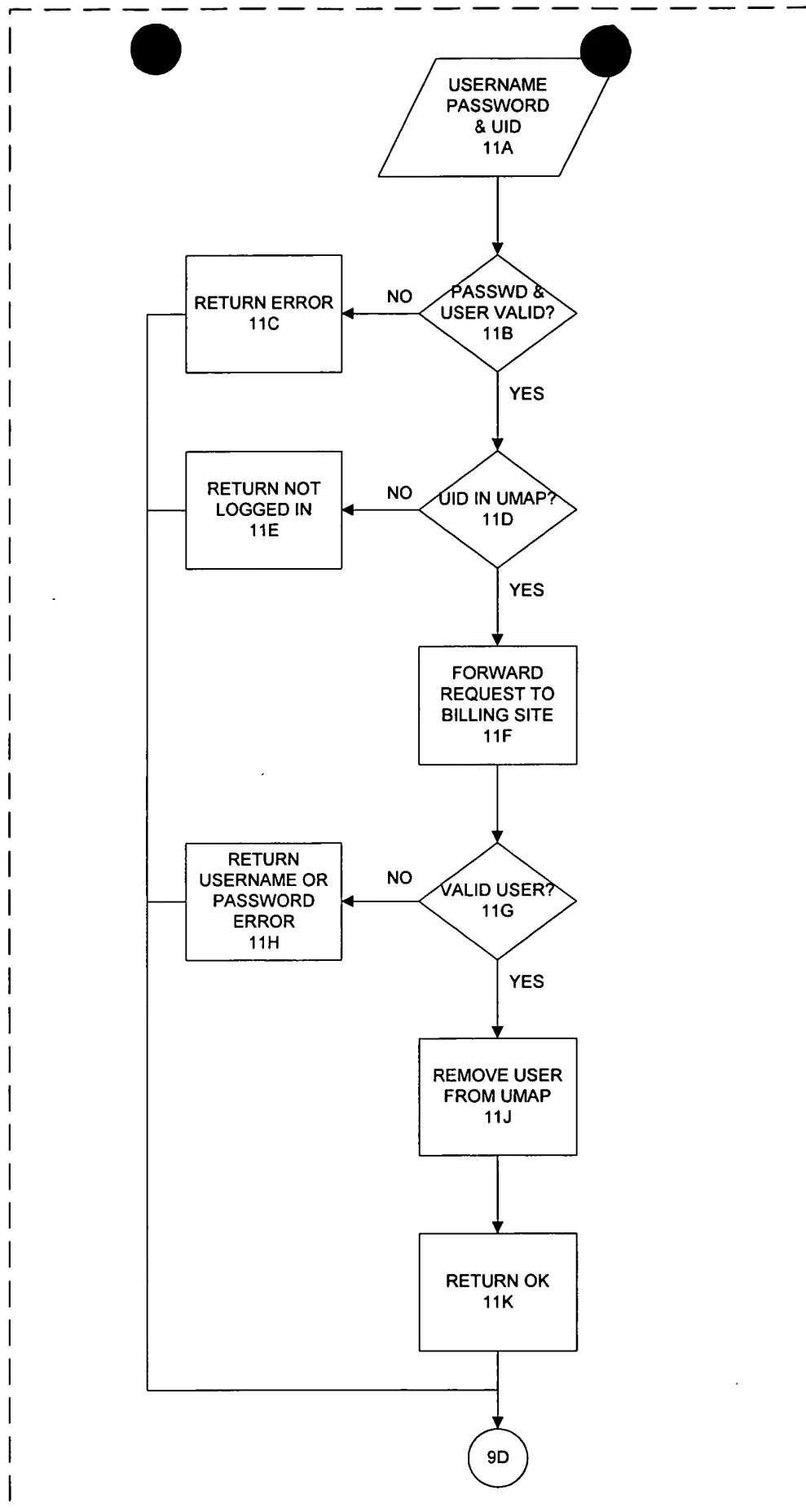
109260-2359660



PROCESS USER LOGIN
REQUEST 9I

Fig. 10

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PROCESS USER
LOGOUT REQUEST 9K

Fig. 11

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graph TD
    Start(( )) --> 12A{PID IN JOB MAP? 12A}
    12A -- YES --> 12B[RETURN JOB ID 12B]
    12A -- NO --> 12C[FORWARD REQUEST TO BILLING SITE 12C]
    12C --> 12D{JID RETURNED? 12D}
    12D -- NO --> 12E[RETURN ERROR RECIEVED FROM SERVER 12E]
    12D -- YES --> 12F[ADD PIDJID MAPPING TO JMAP 12F]
    12F --> 12G[RETURN JID 12G]
    12B --> 9D((9D))
    12E --> 9D
    12G --> 9D
    style Start fill:none,stroke:none
    style 9D fill:none,stroke:none
  
```

PROCESS JOB LOGIN REQUEST 9M

Fig. 12

103260-22959660

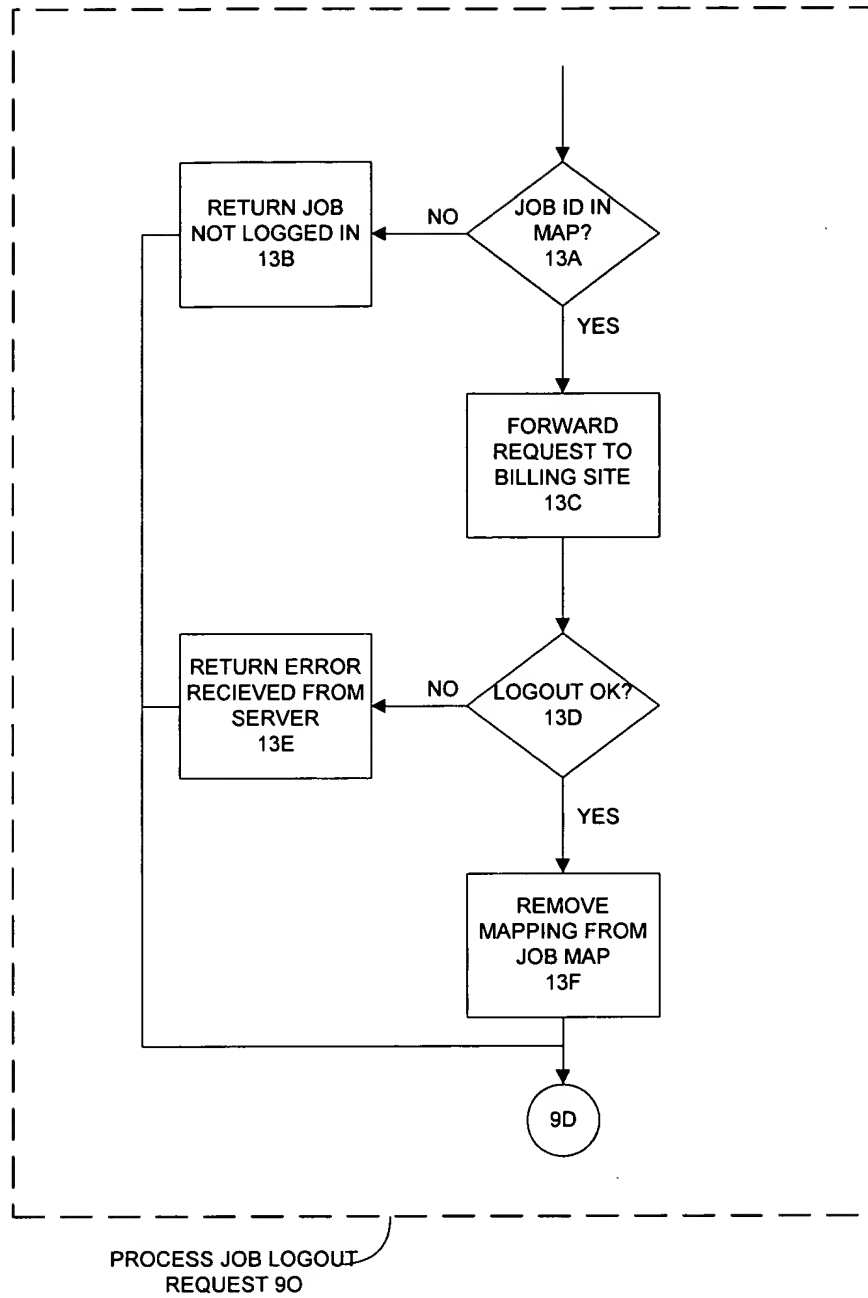


Fig. 13

109260-09601

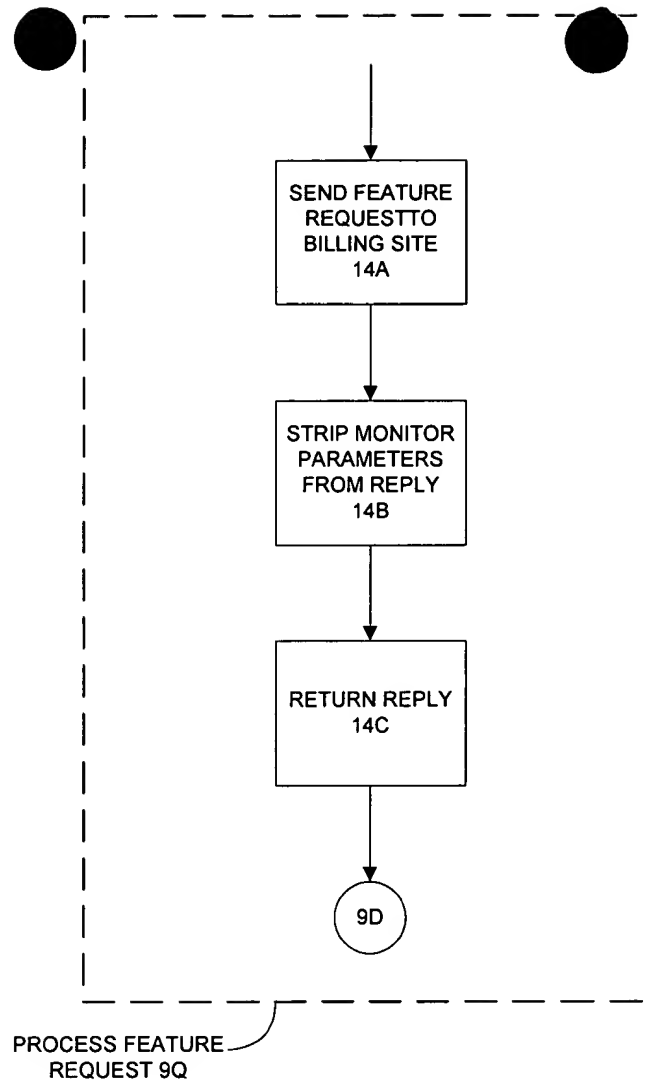
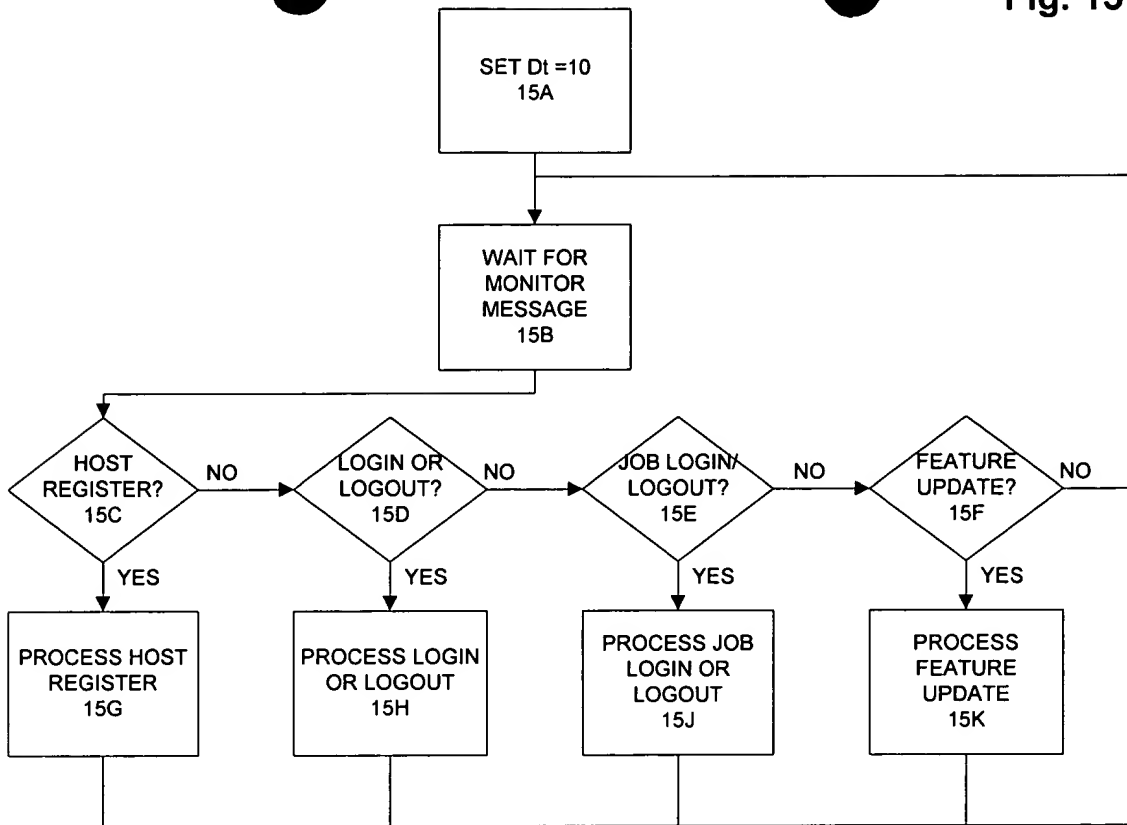


Fig. 14

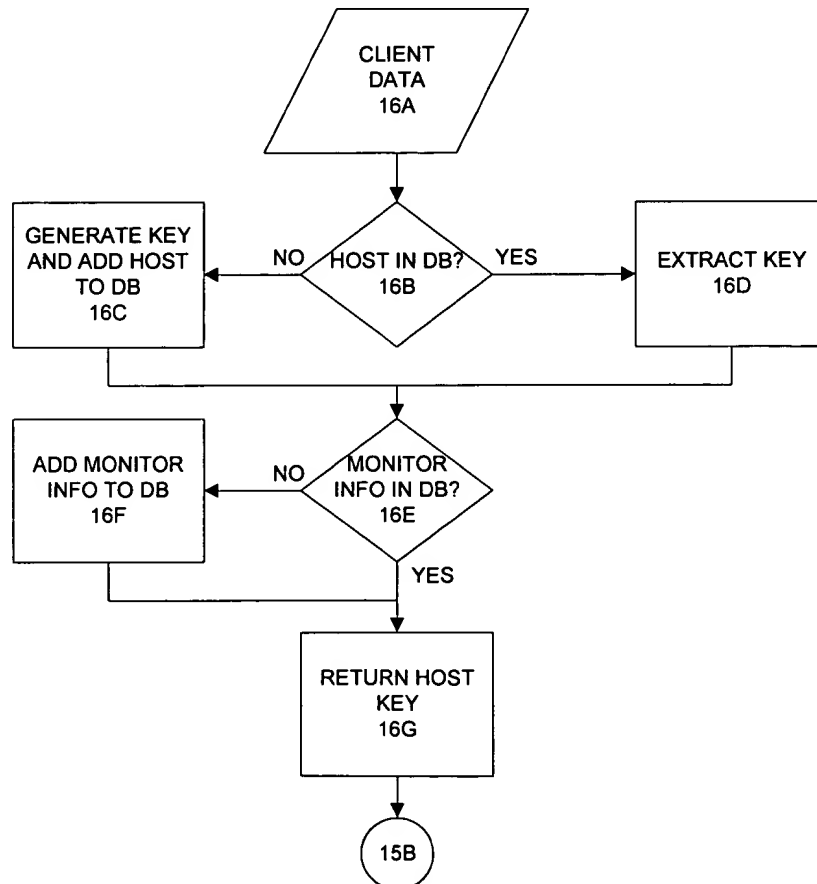
Fig. 15



METERING SERVER 3C

PROCESS HOST REGISTER 15G

Fig. 16



109260-22959660

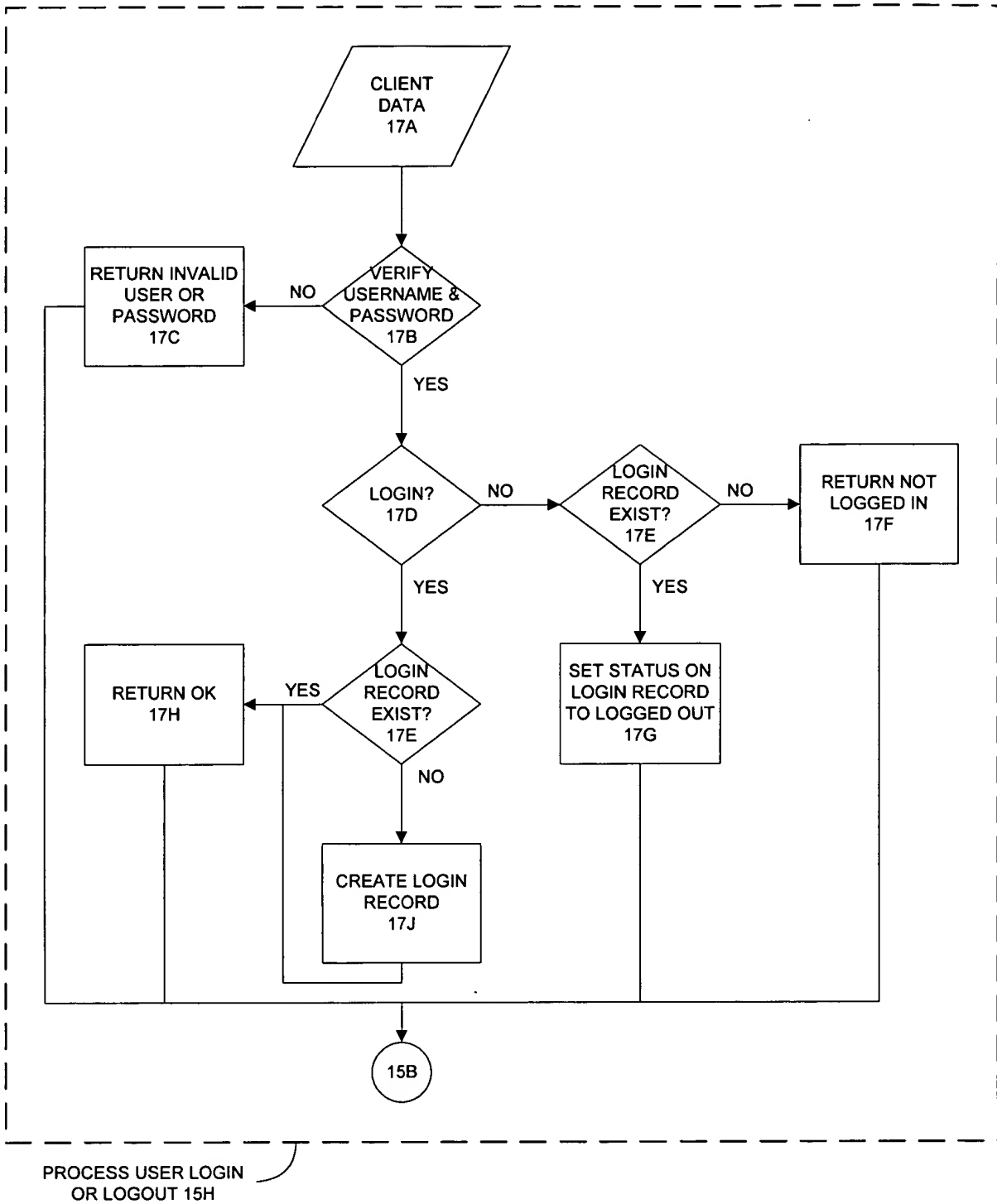


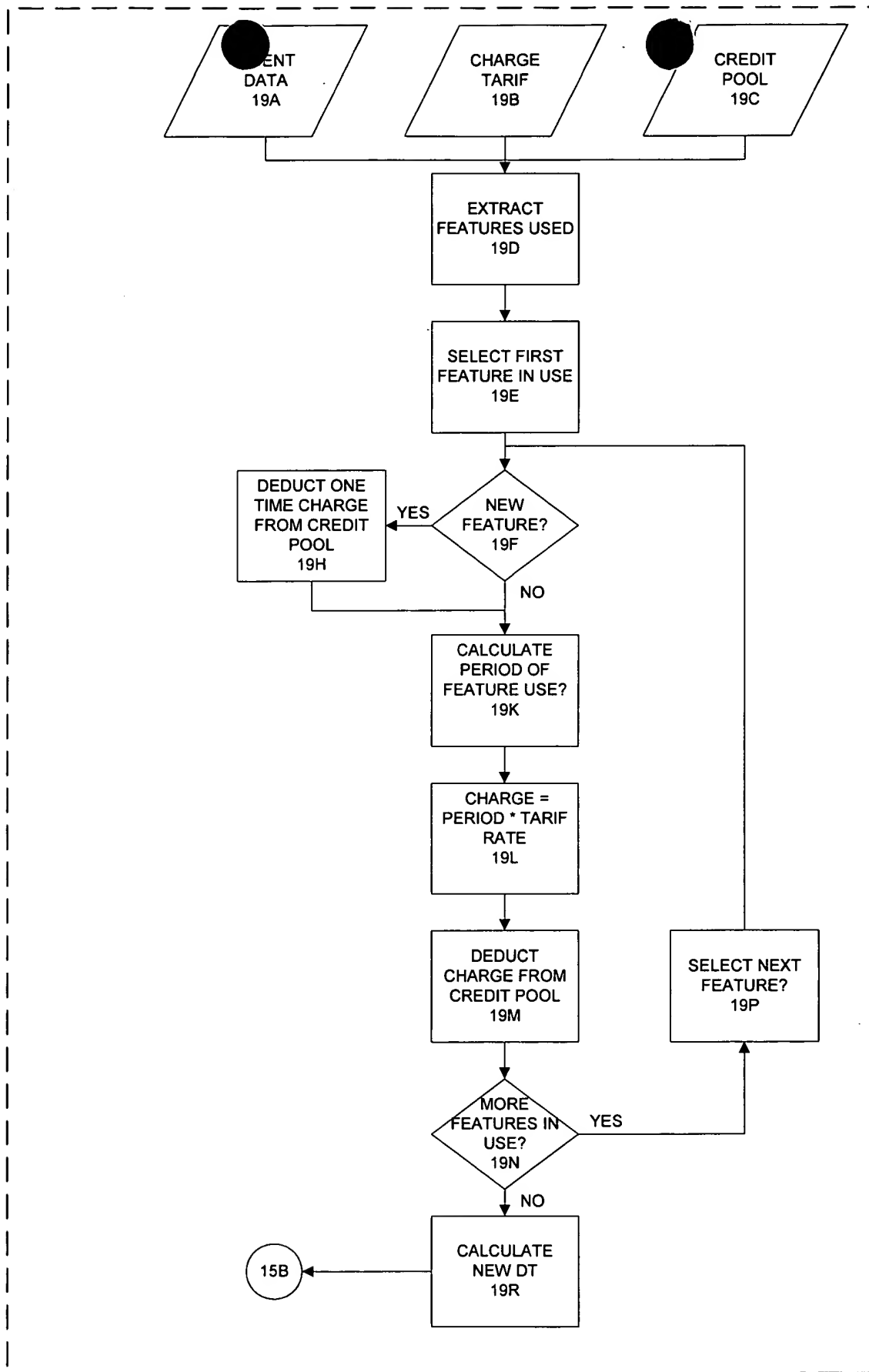
Fig. 17

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graph TD
    Start([CLIENT DATA  
18A]) --> Decision1{JOB RECORD  
EXIST?  
18B}
    Decision1 -- YES --> Decision2{JOB LOGOUT?  
18C}
    Decision1 -- NO --> Process1[ASSIGN KEY  
AND CREATE  
JOB RECORD  
18E]
    Decision2 -- YES --> Process2[FLAG JOB  
LOGGED OUT  
18G]
    Decision2 -- NO --> Process3[EXTRACT JOB  
KEY  
18D]
    Process1 --> Process4[RETURN JOB  
KEY  
18F]
    Process3 --> Process4
    Process2 --> Process5[RETURN  
LOGOUT OK  
18H]
    Process4 --> End((15B))
    Process5 --> End
  
```

PROCESS JOB LOGIN OR LOGOUT 15J

Fig. 18.



PROCESS FEATURE
REQUEST 15K

Fig. 19